

IN THE CLAIMS

1. (currently amended) A method to screen for a breast, bladder, or colon, ~~or lung~~ cancer in a human, comprising:

a) determining sphingosine kinase 1 (SPHK1) human gene copy number in a test sample from a region of the human that is suspected to be precancerous or cancerous, wherein the test sample is selected from the group consisting of breast, bladder, or colon, ~~or lung~~ tissue, thereby generating data for a test human SPHK1 gene copy number; and

b) comparing the test human SPHK1 gene copy number to data for a control SPHK1 gene copy number, said control gene copy number representing the SPHK1 human gene copy number of corresponding normal, cancer-free human tissue of a same tissue type as the test sample, wherein a detectable amplification of the SPHK1 gene in the test sample relative to the control suggests the presence of a precancerous lesion or a cancer in the human.

2. (original) The method according to claim 1, wherein the control gene copy number is two copies per cell.

3-134. (canceled)

135. (previously presented) The method of claim 1 wherein the detectable amplification is at least three-fold.

136. (previously presented) The method of claim 1 wherein the detectable amplification is at least four-fold.

137. (previously presented) The method of claim 1 wherein the detectable amplification is at least five-fold.

138. (previously presented) The method of claim 1 wherein the detectable amplification is at least 10-fold.

139. (currently amended) A method to screen for a breast, bladder, or colon, ~~or lung~~ cancer in a human, comprising:

a) determining in a test sample from a region of the human that is suspected to be precancerous or cancerous, sphingosine kinase 1 (SPHK1) gene copy number wherein said SPHK1 gene encodes an mRNA comprising SEQ ID NO:3 and wherein the test sample is selected from the group consisting of breast, bladder, or colon, ~~or lung~~ tissue, thereby generating data for a test SPHK1 gene copy number; and

b) comparing the test SPHK1 gene copy number to data for a control SPHK1 gene copy number, obtained from a control sample of a same tissue type as the test sample, wherein a detectable amplification of the SPHK1 gene in the test sample relative to the control suggests the presence of a precancerous lesion or a cancer in the human.

140. (previously presented) The method according to claim 139, wherein the control gene copy number is two copies per cell.

141. (previously presented) The method of claim 139 wherein the detectable amplification is at least three-fold.

142. (previously presented) The method of claim 139 wherein the detectable amplification is at least four-fold.

143. (previously presented) The method of claim 139 wherein the detectable amplification is at least five-fold.

144. (previously presented) The method of claim 139 wherein the detectable amplification is at least 10-fold.

145. (new) A method to screen for a lung cancer in a human, comprising:

a) determining sphingosine kinase 1 (SPHK1) human gene copy number in a test sample from a region of the human that is suspected to be precancerous or cancerous, wherein the test sample comprises lung tissue, thereby generating data for a test human SPHK1 gene copy number and wherein SPHK1 human gene copy number is determined using an SPHK1-specific probe; and

b) comparing the test human SPHK1 gene copy number to data for a control SPHK1 gene copy number, said control gene copy number representing the SPHK1 human gene copy number of corresponding normal, cancer-free human tissue of a same tissue type as the test sample, wherein a detectable amplification of the SPHK1 gene in the test sample relative to the control suggests the presence of a precancerous lesion or a cancer in the human.

146. (new) The method of claim 145 wherein said SPHK1 gene encodes an mRNA comprising SEQ ID NO:3.

147. (new) The method according to claim 145, wherein the control gene copy number is two copies per cell.

148. (new) The method of claim 145 wherein the detectable amplification is at least three-fold.

149. (new) The method of claim 145 wherein the detectable amplification is at least four-fold.

150. (new) The method of claim 145 wherein the detectable amplification is at least five-fold.

151. (new) The method of claim 145 wherein the detectable amplification is at least 10-fold.